TURBOCHEF

Accelerating the World of Cooking ™

Installation Manual

FOR THE TURBOCHEF 3240 HIGH H CONVEYOR OVEN

⚠ WARNING: The initial start-up (pages 9-A1) MUST be performed by an authorized service technician. If the initial start-up is not performed by an authorized service technician, the oven's warranty will be VOID.

For further information, call
800.90TURBO
or
+1 214.379.6000

The information contained in this manual is important for the proper installation of this oven.

Errors – descriptive, typographic, or pictorial – are subject to correction. Specifications are subject to change without notice.

PLEASE CAREFULLY READ THIS MANUAL AND RETAIN IT FOR FUTURE REFERENCE.

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Installation Overview

Before installing the HhC 3240 oven, thoroughly read this manual, familiarize yourself with the installation procedures, and check with the local code enforcement for any unforseen requirements needed for the installation (refer to the regulations in force in the country in which the appliance is being installed). To set up connections for the oven, select electricians and plumbers who are qualified to make all connections per national and local building codes (refer to the regulations in force in the country in which the appliance is being installed), and have experience installing conveyor ovens and food service equipment. Several days before the installation, a site visit should be conducted to ensure that all electric, gas, and ventilation utilities are of adequate size and ready for use before the installation occurs, and that a restraint device is available to guard against strain to utility connections.

NOTE: Thoroughly inspect the oven for freight damage as soon as it arrives. Immediately note any damage and contact the shipping company within 24 hours in order to file a claim. TurboChef is not responsible if the product is damaged in shipment.

Required/Replacement Parts

-103572	8” (203.2mm) gas pipe (1 for double oven, 2 for triple oven)
-103576	10” (254mm) gas pipe
-HHC-6137	Burner compartment cover
-HHC-6614	Chain, conveyor
-HHC-6561-1	Conveyor, Standard (L to R)
-HHC-6561-2	Conveyor, Standard (R to L)
-HHC-6661-1	Conveyor, 50/50 (L to R)
-HHC-6661-2	Conveyor, 50/50 (R to L)
-HHC-6662-1	Conveyor, 70/30 (L to R)
-HHC-6662-2	Conveyor, 70/30 (R to L)
-HHC-6374	Cooling tube
-HHC-6464	Cover, left, lower
-HHC-6525	Cover, left, upper
-HHC-6463	Cover, right, lower
-HHC-6524	Cover, right, upper
-HHC-6574	Crumb tray kit for single or base oven
-HHC-6575	Crumb tray kit for middle or top oven
-HHC-6411	Guard, chain
-HHC-6850-26	Leg kit for single oven
-HHC-6850-20	Leg kit for single or double oven
-HHC-6850-14	Leg kit for double or triple oven
-103588	Levelers (x4)
-HHC-6400	Shelf, Conveyor
-HHC-6391	Stacking bracket (x2 for double, x4 for triple)
-HHC-6591	Window
-HHC-6624	Window bracket (x2)
-HHC-6632	Window handle

Required Hardware

-102949	Bolts for legs (x16) - 3/8-16 x 3/4” serrated hex washer head
-102949	Bolts to replace maneuvering casters and fill back wall holes (x8)- 3/8-16 x 3/4” serrated hex washer head
-101696	Burner compartment cover screws (x4) - #8 x 3/8” phillips pan head
-101752	Cooling tube screw - 1/4-20 x 1/2” thumb screw
-101392	Lifting bracket replacement screws (x4) - 1/4-20 x 1/2” phillips flat head
-102949	Stacking bracket bolts (x8 for double, x16 for triple) - 3/8-16 x 3/4” serrated hex washer head
-101392	Window bracket screws (x2) - 1/4-20 x 1/2” philips flat head

Required Equipment and Tools

-Phillips head screw driver
-Standard english socket set
-Straight blade screw driver
-Thread sealing compound
-Lifts and adapters (x2 HHC-6616)
-Lifting pole (10 feet [3.05m] long, 1.5 inch [38.1 mm] diameter, schedule 40 steel)
-Safety pins or pipe caps (x2)

⚠ WARNING: For safety, use safety pins or pipe caps when lifting the oven.

NOTE: Leg kits include levelers.
NOTE: Conveyor assemblies include chain guard.
NOTE: Crumb tray kits include a convyor shelf.

Assembly Instructions

The following instructions detail how to assemble the HhC 3240 oven. The oven weighs approximately 800 lbs. (363 kg). DO NOT attempt to assemble this oven with damaged or defective lifts, legs, or casters. Call 800.90TURBO (+1 214-379-6000) for specifications, pricing, and availability on lifts and lifting adapters.

STEP 1: REMOVE THE OVEN FROM THE PALLET

1.1 Remove the oven accessories and materials from the pallet. Store all accessories and materials in a safe, accessible place; they will be used later in the assembly proccess.

Step 1.1

1.2 Remove all packaging that attaches the oven to the pallet.

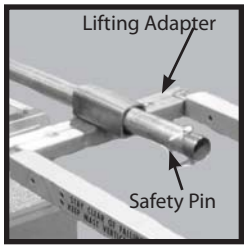
Step 1.2

1.3 Insert the lifting pole through the lifting brackets. The lifting pole must be to the following specifications: 10 feet (3.05 m) long, 1.5 inch (38.1 mm) diameter, schedule 40 steel.

Step 1.3

1.4 Two lifts are required to lift the oven. Position the lifts at each end of the oven and connect the lifting pole to the lifts using the lifting adapters.

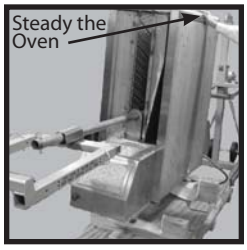
Step 1.4



⚠ WARNING: Insert safety pins through the lifting pole (as shown in the adjacent figure) or place pipe caps on the ends (whichever applies).

⚠ WARNING: The oven is top heavy and will tip. Position someone to steady the oven during lifting as shown in STEP 1.5 to minimize the risk of tipping.

1.5 Using the lifts, slowly raise the oven above the pallet. Keep the unit level.



Step 1.5

⚠DANGER: DO NOT place any body parts underneath the oven while it is being lifted. The oven weighs approximately 800 lbs. (363 kg); whenever the oven is lifted, a crush hazard is present.

1.6 Remove the pallet from underneath the oven. DO NOT place any body parts underneath the oven while it is lifted. Remove the pallet by holding onto the edge and pulling it away from the oven.

1.7 Lower the oven to the ground and let it sit on the attached maneuvering casters.

1.8 Disconnect the lifting pole from the lifting adapters and remove the lifting pole.

Step 1.7

STEP 2: POSITION THE OVEN

2.1 Maneuver the oven to its final location.

2.2 Attach the legs. Each leg must be attached with four of the supplied bolts (refer to page 2) and with the curved portion facing outward. Ensure all bolts are tightened.

Step 2.2

2.3 Re-insert the lifting pole through the lifting brackets.

2.4 Re-position the lifts and re-attach the lifting adapters to the lifting pole.

⚠WARNING: Insert safety pins through the lifting pole or place pipe caps on the ends (whichever applies).

⚠DANGER: The oven is top heavy and will tip. Position someone to steady the oven during lifting as shown in STEP 1.5, page 3 to minimize the risk of tipping.

Step 2.4

2.5 Using the lifts, slowly raise the oven. Keep the unit level.

⚠DANGER: DO NOT place any body parts underneath the oven while it is being lifted. The oven weighs in excess of 800 lbs. (363 kg); whenever the oven is lifted, a crush hazard is present.

2.6 Rotate the oven to the orientation as shown adjacent.

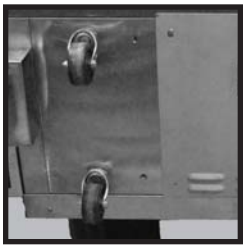
2.7 Lower the oven to the ground.

Step 2.6

2.8 Remove the maneuvering casters from the back of the oven.

2.9 Immediately discard the maneuvering casters. These casters are not designed to be used again.

2.10 Replace the maneuvering casters with the supplied bolts (refer to page 2) and ensure that all the holes in the rear of the oven are plugged.



Step 2.8

STEP 3: INSTALL THE INLET GAS PIPE

⚠ WARNING: When installing any gas pipes and/or making connections, observe all local gas and building codes (refer to the regulations in force in the country in which the appliance is being installed). Use the proper thread-sealing compound when installing gas pipes. DO NOT use Teflon® tape as thread sealant.

3.1 Remove the oven's back panel and install the 10" (254mm) gas pipe inlet (refer to page 2) as shown adjacent. The 10" (254mm) gas pipe inlet is only used on a single or bottom oven.

Step 3.1

NOTE: If installing a single oven, proceed to STEP 5, page 7.

STEP 4: STACK THE OVENS

4.1 If installing a double or triple stacked oven, remove the gas pipe plug in the top of the base oven and repeat STEPS 1.1-2.6 (skip step 2.2), pages 3 and 4 for the middle oven.

Step 4.1

4.2 Position the base oven beneath the raised oven.

4.3 Lock the casters of the base oven.

4.4 Lower the raised oven onto the base oven.

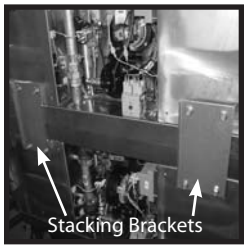
4.5 Remove the maneuvering casters from the back of the oven.

4.6 Immediately discard the maneuvering casters. These casters are not designed to be used again.

4.7 Replace the maneuvering casters with the supplied bolts (refer to page 2) and ensure that all the holes in the rear of the oven are plugged.

Step 4.5

4.8 Install the stacking brackets (refer to page 2) to the two ovens as shown adjacent. Both stacking brackets MUST be attached to the ovens.



Step 4.8

NOTE: When installing any gas pipes and/or making connections, observe all local gas and building codes (refer to the regulations in force in the country in which the appliance is being installed). Use the proper thread-sealing compound when installing gas pipes. DO NOT use Teflon® tape as thread sealant.

4.9 Remove the oven's back panel and install the 8" (203.2 mm) gas pipe (refer to page 2) between the two ovens.

Step 4.9

NOTE: Unless you are installing a triple-stacked oven, proceed to STEP 5, page 7.

4.10 If installing a triple-stacked oven, remove the gas pipe plug in the top of the middle oven and repeat STEPS 1.1-2.6 (skip step 2.2), pages 3 and 4 for the top oven.

Step 4.10

4.11 Position the base ovens beneath the raised oven.

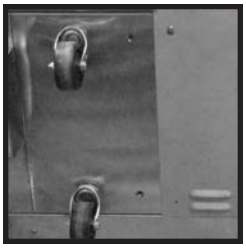
4.12 Lock the casters of the base oven.

4.13 Lower the raised oven onto the base ovens.

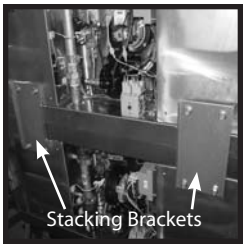
4.14 Remove the maneuvering casters from the back of the oven.

4.15 Immediately discard the maneuvering casters. These casters are not designed to be used again.

4.16 Ensure that all the holes in the rear of the oven are plugged with the provided bolts.


Step 4.14

4.17 Install the stacking brackets to the middle and top ovens. Both stacking brackets MUST be attached to the ovens.



Step 4.17

⚠WARNING: When installing any gas pipes and/or making connections, observe all local gas and building codes (refer to the regulations in force in the country in which the appliance is being installed). Use the proper thread-sealing compound when installing gas pipes. DO NOT use Teflon® tape as thread sealant.

4.18 Remove the burner compartment cover(s) and install the 8" (203.2 mm) gas pipe (refer to page 2) between the middle and top ovens.

Step 4.18

STEP 5: INSTALL THE COMPONENTS

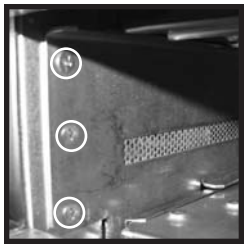
5.1 Remove the lifting brackets from the oven(s).

5.2 Immediately discard the lifting brackets and lifting-bracket bolts.

Step 5.1

5.3 Install the supplied screws (refer to page 2).

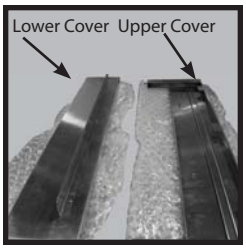
5.4 Replace the burner compartment cover(s).



Step 5.3

5.5 Install the bottom covers on the oven(s). A left and right bottom cover is supplied. Each bottom cover is specific to the left and right sides of the oven(s).

5.6 Install the upper covers on the oven(s). A left and right upper cover is supplied. Each top cover is specific to the left and right sides of the oven(s).



Step 5.5-5.6

5.7 Install the conveyor belt assembly on the oven. The conveyor belt assembly can only be installed from the right side of the oven.

5.8 Maneuver the conveyor into position by lifting both ends and moving it slightly back and forth until it catches in place. Once the conveyor is in place, you should not be able to move it unless you lift the ends.

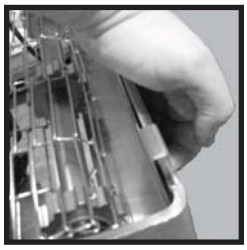
Step 5.7

5.9 Attach the conveyor drive chain.

NOTE: Repeat STEPS 5.1-5.9 for the middle and top oven if double or triple-stacking ovens.

5.10 Attach the crumb tray holders to each end of the conveyor(s).

5.11 Install both crumb trays by sliding them into place underneath the ends of the conveyor(s).



Step 5.10

5.12 Install the conveyor drive chain guard. The chain guard fits in place over the chain and the end of the belt.

Step 5.12

5.13 Attach one leveler to each of the four legs.

5.14 Lower each leveler until the base rests on the floor. Equal pressure should be on both the caster and the leg, which helps prevent the casters from being damaged over time.

Step 5.13-5.14

5.15 Ensure the casters are locked.

5.16 Attach the cooling duct(s) and secure it in place with the supplied thumb screw (refer to page 2).

Step 5.16

STEP 6: INSTALL THE WINDOW (SELECT MODELS ONLY)

6.1 Remove the right hand window bracket.

6.2 Insert the left side of the window into the left hand bracket.

6.3 Insert the right side of the window into the previously removed right hand bracket.

Step 6.2-6.3

6.4 Install the supplied screw (refer to page 2) in the top hole of the bracket and securely tighten.

6.5 Install the supplied screw (refer to page 2) in the bottom hole of the bracket and securely tighten.

Step 6.4-6.5

6.6 Close the window. When closed, the window should appear as shown in STEP 6.5.

NOTE: Repeat STEP 6 for the middle and top ovens if double or triple-stacking ovens.

Step 6.6

Start-up Overview

TurboChef includes an authorized start-up procedure with every oven purchase. This procedure consists of an authorized local agent ensuring that all steps in this installation manual were completed properly, and that the oven is functioning to factory specifications.

TurboChef will schedule this authorized start-up procedure through the equipment distributor. Please contact Turbo-Chef with any questions regarding the start-up and scheduling at 800.90TURBO (+1 214-379-6000).

The purpose of the start-up is to ensure that the installation is complete and correct. The technician must complete the Initial Start-up Checklist (located at the back of this manual) using the procedures and guidelines (pages 10-13) and return it to TurboChef. The oven must meet all specifications and pass all tests outlined in the Start-up Checklist for the oven to enter into the manufacturer's warranty program.

If the oven fails to pass any of the following tests, all electrical and gas connections MUST be disconnected and the technician MUST indicate that the oven is out of warranty and non-operational. The oven MUST remain disconnected and will remain out of warranty until all failing items are corrected and TurboChef is notified that the oven has passed all tests.

Maintenance Mode

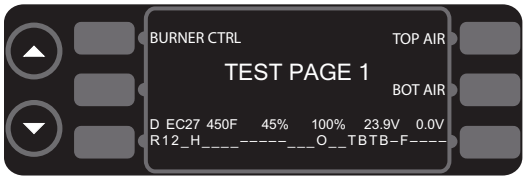
To successfully complete the following procedures, maintenance mode must be activated. Some ovens may already have this mode activated; if so, leave maintenance mode activated.

To activate maintenance mode,

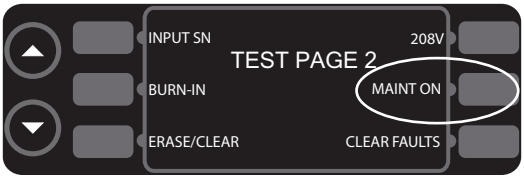
1. Ensure the oven is in the oven off or cooling down mode.
2. Press the up key until you enter the config menu.
3. Press the bottom-right soft key to enter test mode (see below).
4. Input the password 2 4 3 3.
5. Press the down key to acess test page 2 (see below).
6. Press the middle-right soft key to activate maintenance mode (see below).

NOTE: Once the start-up process is successfully completed, repeat the above steps to deactivate maintanence mode.

Maintenance Mode, Step 3



Maintenance Mode, Step 5



Maintenance Mode, Step 6

Required Equipment

-5mm nut driver

-8mm nut driver

-Digital manometer (P/N: HHC-3001)

-Gas connection kit
Single oven (P/N: HHC-6580)
Stacked oven (P/N: HHC-6579)

-Leak test materials

-Philips head screw driver

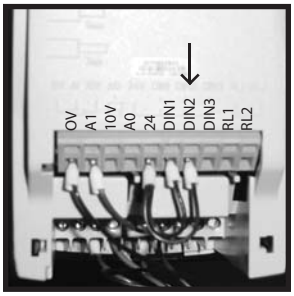
-Smoke tester

-Straight blade screw driver

Assembly

1. Ensure the legs are securely attached.
2. Ensure the leg bolts are tightened.
3. Ensure the window is correctly installed. Refer to page 8 STEP 6.
4. Ensure the conveyor belt assembly is correctly installed. Refer to page 7 STEPS 5.7-5.9.
5. Verify that the oven is cofigured to drive the belt in the correct direction (see below illustrations).
   a. Open the right end bell.
   b. Remove the front panel from the CMSC.
   c. Ensure the conveyor drive is set to the correct direction.
      i. For left to right configurations (-1), ensure the far right wire is inserted into DIN2 as shown in figure *Assembly, Step 5.c.i* below.
      ii. For right to left configurations (-2), ensure the far right wire is inserted into DIN3 as shown in figure *Assembly, Step 5.c.ii* below.
6. Verify the direction the belt travels matches figure *Assembly, Step 6* below. If not, the belt must be reversed.
7. Verify the size of the gas supply line. The gas supply line at the appliance must be at least 1 inch (25.4 mm) diameter for a single oven and at least 2 inch (50.8 mm) diameter for a double or triple oven (single or base oven) for Nat, I_{2H}, I_{2E}, I_{2E+}, and I_{2L} category gas types. The gas supply line at the appliance must be at least .75 inch (19.05 mm) diameter for a single oven and at least 1 inch (50.8 mm) diameter for a double or triple oven (single or base oven) for LP or I_{3P} category gas types.
8. Verify the size of the shut-off valve used. A minimum .75-inch (19.05 mm) ID full flow isvalve required for a single oven. A minimum 1-inch (25.4 mm) ID full flow valve required for a double or triple-stacked oven.
9. Verify the size of the flex hose used.
   - A minimum .75-inch (19.05 mm) flex hose is required for single ovens.
   - A minimum 1-inch (25.4 mm) flex hose is required for stacked ovens.
10. Ensure a strain-relief cable is installed to a bottom bolt hole as shown in figure *Assembly, Step 10* below and is correctly installed to the wall.
11. Ensure that all bolt holes in the rear of the oven are plugged with the provided bolts, as shown below in *Assembly, Step 10*.
12. For double or triple-stacked ovens, ensure that the stacking brackets are correctly attached as shown in *Assembly, Step 11* below.
13. Ensure that each chain is set to the correct tension. Grasp the chain as shown in *Assembly, Step 12* below. The chain must have enough freedom to move between 1/4 inch (6mm) and 3/8 inch (10mm) to be at the correct tension. If the tension is too loose or too tight, reset the tension.

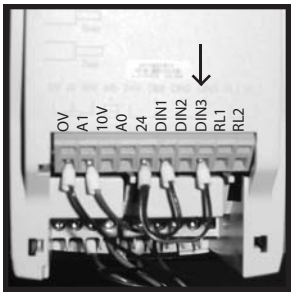
Assembly, Step 5.b



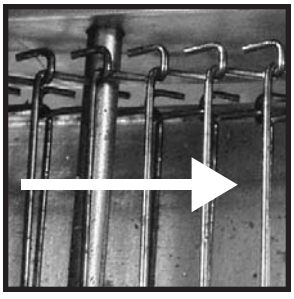
Assembly, Step 5.c.i

Assembly, Step 10

Assembly, Step 11



Assembly, Step 5.c.ii


Assembly, Step 6

Assembly, Step 12

Assembly, Step 13

Connections

Leak-testing all connections is required.

NOTE: TurboChef suggests using a soap solution; however, check with the local code authority to ensure that no other test is required (refer to the regulations in force in the country in which the appliance is being installed). The prevailing authority is the local code (or regualtions).

1. Soap-test all connections for gas leaks.
   a. Turn on the gas supply.
   b. Spray all gas connections with a soap solution.
   -If growing soap bubbles are observed, a leak is present. Immediately shut off the gas supply.
   -If no growth occurs, the connections are intact. Turn off the gas supply.
2. Verify the size of the breaker. For North America, 20 Amp independent circuit is required, for EU/Asia a 16 Amp independent circuit is required.
3. Ensure there is an individual breaker per unit for multiple oven locations.
4. Ensure the factory-supplied plug is used, or note any differences on the Start-up Checklist.
5. Write the voltage readings at the incoming voltage terminal block on the Start-up Checklist.
6. Verify the 24 VAC transformer configuration: 208 or 240. The oven is shipped with the transformer's primary wiring disconnected. Determine the voltage on site during the start-up process and connect the transformer accordingly. See figure *Connections, Step 6*.
   -208 VAC installation: connect wire B (blue) to wire C (blue). The figure below is configured for 208 VAC operation.
   -240 VAC installation: connect wire A (red) to wire C (blue).

NOTE: The oven will not operate until this task is completed.

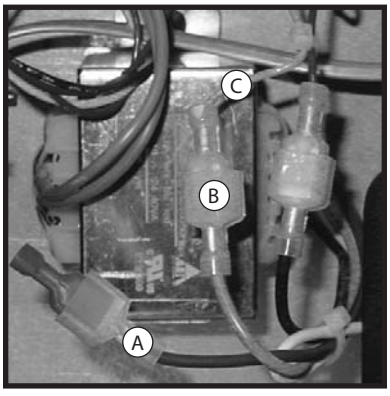
Gas

Activate maintenance mode (refer to page 9) if necessary.

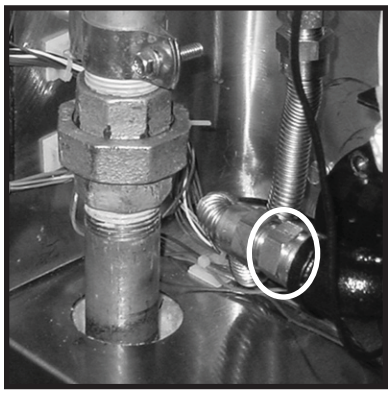
An Electronic Manometer must be used to properly set all pressures. If the minimum pressure is not set correctly, the oven temperature will slowly rise in stand-by mode and eventually cause cooking issues as well as trip the high limit temperature switch. Electronic Manometers (HHC-3001) are available through TurboChef; call 800.90TURBO (+1 214-379-6000) for pricing and availability.

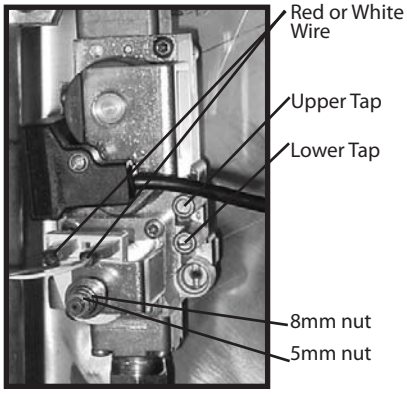
1. Verify the type of gas being supplied to the oven — natural, propane/L.P, I_{2H}, I_{2E}, I_{2E+}, I_{2L}, or I_{3P}.
2. Verify the type of gas to which the oven was factory-set to operate. Check the data plate on the rear of the oven (this should match the type of gas being supplied to the oven).
3. Verify the proper orifice is installed and it matches the description of the data plate. The orifice (fig. *Gas, Step 3*) is located at the base of the flex connector attached to the burner inlet. A blue orifice is used for natural gas. A yellow orifice is used for propane/L.P. gas.
4. Verify the incoming gas pressure (static). This is the pressure sent to the oven from the existing piping system when all of the equipment in the piping system is off (pilot lights are acceptable). Take this reading from the upper tap of the gas valve (fig. *Gas, Steps 4-7*). This tap will show the incoming pressure before the internal regulator of the gas valve. This (static) reading is to be taken with the oven off and with all of the other appliances in this piping system also off.

⚠ WARNING: The pressures must be no less than 6" W.C. (152.4 mm H_2O, 14.94mb) and no more than 14" W.C. (350.6 mm H_2O, 34.87 mb). Otherwise, severe damage to the equipment can occur.



Connections, Step 6


Gas, Step 3



Gas, Steps 4-7

5. Turn the oven on and select a cooking profile. During warmup (or while both fan speeds are set to 65%), verify the gas pressure at the main burner during 100% flame. Take this reading from the lower tap of the gas valve (fig. *Gas, Steps 4-7*). This tap shows the gas valve's internal regulator settings. The maximum operating pressure for natural gas and propane is 3.5" W.C. (88.9 mmH_2O, 8.71 mb), unless operating I_{2L} gas — see note below. If needed, using an 8mm nut driver, adjust the 8mm nut (fig. *Gas, Steps 4-7*) until the manometer reads 3.5" W.C. (88.9 mmH_2O, 8.71 mb) unless operating I_{2L} gas — see note below. Turn the 8mm nut driver clockwise to increase the pressure, or counterclockwise to decrease the pressure.

NOTE: The oven operates at the same pressures for all types of gas, except I_{2L} (4" W.C. [101.6 mmH_2O, 9.96 mb]).

NOTE: Pressures are factory set and require only minimal adjustment. Verify oven operation on the display. Confirm the oven is operating at 100% at the time of the test.

6. Verify the gas pressures at minimum flame. This measurement is taken from the lower tap of the gas valve while either the red or white wire is disconnected (page 11, fig. *Gas, Steps 4-7*). This tap will show the gas valve's internal minimum flame regulator settings. The pressure for both natural gas and propane is 0.10" W.C. (2.54 mmH_2O, 0.249 mb). If needed, using a 5mm nut driver, adjust the 5mm nut (page 11, fig. *Gas, Steps 4-7*) until the electronic manometer reads 0.10" W.C. (2.54 mm H_2O, 0.249 mb). Reconnect the wire you disconnected.

NOTE: To ensure the burner is operating at the minimum flame, disconnect the red wire from the modulating coil of the gas valve (page 11, fig. *Gas, Steps 4-7*).

7. Verify the incoming gas pressure (operating). This is the pressure sent to the oven from the existing piping system when the oven is operating at 100% flame. Take this reading from the upper tap of the gas valve (page 11, fig. *Gas, Steps 4-7*). This tap will show the incoming pressure before the regulator inside the gas valve. The pressures must be no less than 6" W.C. (152.4 mm H_2O, 14.94mb) and no more than 14" W.C. (350.6 mm H_2O, 34.87 mb).

⚠ CAUTION: A pressure of less than 6" W.C. (152.4 mm H_2O, 14.94mb) can cause potential cook problems.

⚠ WARNING: The pressures must be no more than 14" W.C. (350.6 mm H_2O, 34.87 mb). Otherwise, severe damage to the equipment can occur.

8. On the Start-Up Checklist, indicate if any adjustments were made.

9. Verify proper flame rectification.
   a. Ensure the oven is in the off or cooling down mode.
   b. Remove the flame signal ground wire from the ignition module.
   c. Connect a DC multipurpose meter that is able to read micro amps (*u*A) in series with the flame signal ground wire.
      i. Connect the red (+) meter lead to the free end of the flame signal ground wire.
      ii. Connect the black (-) meter lead to the quick connect flame signal ground wire terminal on the ignition module.
   d. From the off or cooling down mode, select a cooking profile to operate the oven burner.
   e. The reading must be above 1.5 DC *u*A and it must be steady.

   The oven control system uses basic flame rectification to verify if a flame is present. The micro amps must be greater than 1.5 DC *u*A. If the reading is below 1.5 DC *u*A or is not steady, remove the burner assembly and investigate the cause. Look for a loose ignition/sensor wire, or defective sensor assembly. Follow the troubleshooting steps outlined in the service manual.

10. Confirm all pressure taps have been properly closed off by performing a soap solution test (see Connections, pages 10-11). Look for any enlarging bubbles on all the gas connections. Always adhere to local gas codes and required methods of leakage testing in the immediate location (refer to the regulations in force in the country in which the appliance is being installed). The prevailing authority is the local code (or regulations).

11. On the Start-Up Checklist, indicate if the gas connections passed the soap test.

Ventilation

Performing a ventilation test is required. TurboChef suggests using a smoke test; however, check with the local code authority to ensure that no other test is required (refer to the regulations in force in the country in which the appliance is being installed). The prevailing authority is the local code (or regulations). Smoke testers are available through TurboChef. Call 800.90TURBO (+1 214-379-6000) for pricing and availability.

1. Perform a smoke test.
   a. Turn on the ventilation hood.
   b. Turn the oven(s) on.
   c. Ready the oven for the smoke test.
      i. Select a cooking profile.
      ii. Press the temperature key.
      iii. Press and hold the up arrow until the display reads above 500°F (260°C).

iv. Press the belt speed key to select the belt. Multiple-belt ovens will have front and rear options.
v. Press and hold the down arrow until the display shows the lowest belt speed.
vi. Ensure that the oven has reached 500°F (260°C).

d. Light and place the smoke tester on a non-combustible plate.
e. Place the plate on the conveyor in the middle of the oven.

2. Verify the ventilation hood passes the smoke test. If 80% of the smoke is captured by the ventilation hood, the hood passed the test.
3. Note whether a power or gravity hood was used. TurboChef discourages the use of a gravity hood, as extra care must be taken when balancing the make-up air re-entering the room.
4. Ensure that the proper amount of make-up air enters the room. Is negative or positive pressure noticeable in the room? Check to see if doors slam shut or are hard to open (check the local code authority for specific guidelines or refer to the regulations in force in the country in which the appliance is being installed).
5. On the Start-Up Checklist, indicate whether or not the vent hood operates properly.

Start-up Checklist

1. Indicate whether or not the conveyor belt operates properly.
   a. Ensure the oven is in the off or cooling down mode.
   b. Select a cooking profile.
   c. Select a belt speed. The oven will warm to the pre-set temperature.
   d. From the cooking screen, press the belt speed key.
   e. Press the up or down arrow keys to adjust the speed.
   f. Ensure that the conveyor belt starts, operates properly, and that the speed adjusts accordingly.
2. Indicate whether or not the combustion blower modulates. The combustion blower motor is controlled by a frequency drive similar to the blower motors and the belt. As the gas valve modulates according to temperature, the blower also modulates. This operation is controlled through the speed control and the I/O board. Confirm that the fan changes speed when the oven reaches set temperature (low flame).
3. Indicate whether or not the convection blowers change speed.
   a. Ensure that the oven is in the off mode.
   b. Press the up key to enter the config menu.
   c. Press the bottom-right soft key to enter test mode (see *Start-Up Checklist, Step 3.c* below).
   d. Input the password 2 4 3 3.
   e. Use the top-right and middle-right soft keys to select the the top or bottom convection blower (see *Start-Up Checklist, Step 3.e* below).
   f. Use the up or down arrow keys to adjust the speed.
4. A smart card is provided with each oven; either a blank card for the purpose of backing up menu settings as they are developed, or one that has been programmed with the customer's specific menu. If programmed, the card will be labeled. If blank, the card will not be labeled.

   If the card has a label, load it to the oven (for more information on loading menus, see the Owner's or Service Manual).
5. Under customer/manager instruction, perform a test cook. Indicate whether or not the outcome was satisfactory.

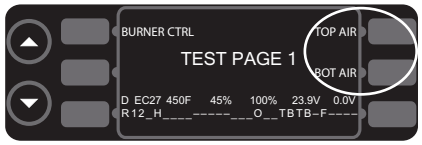
NOTE: Unless the customer requests that maintenance mode remains activated, deactivate maintenance mode by following the steps on page 9.

Customer Checklist

1. Verify that the customer/manager has the owner's manual on site. This manual is included in the oven's packaging.
2. Verify that the customer/manager is aware of the oven's basic operation. This information is located in the owner's manual.
3. Verify that the customer/manager is aware of the cleaning procedures. This information is located in the owner's manual and on the supplied poster.
4. Verify that the customer/manager has had the opportunity to ask questions. If necessary, call the TurboChef Technical Service line for assistance at 800.90TURBO (+1 214-379-6000), and press 9 for service.

Start-up Checklist, Step 1.d

Start-up Checklist, Step 3.c



Start-up Checklist, Step 3.e

Initial Start-Up Checklist

This form must be completed in its entirety and submitted to TurboChef to activate the warranty and ensure proper operation. In the case of a multiple oven installation, a "Start-Up Checklist" form must be completed for **each oven**, noting its position in the stacked configuration.

You may submit this form by either:

-Scanning/emailing to: warranty@turbochef.com

-Mailing to: TurboChef
Attn: Warranty Department
4240 International Parkway Suite #105
Carrollton, TX 75007

-Faxing to: 214-379-6085

Before attempting to install the oven, ensure all utilities are complete and ready for final connection and operation. If any of the requirements listed below are incomplete, notify the responsible party to remedy the condition. The oven must be fully operational and tested before finalizing this document.

Requirements:

- Gas Volume: Maximum input per cavity 85k BTU (25kW [Gross])
- Gas Pressure (Nat and LP): 6" W.C. (152.4 mmH_2O) (14.94 mb) min, 14" (350.6 mm H_2O, 34.87 mb) max
- Gas Shut-Off Valve Size: A minimum .75 inch (19.05 mm) I.D. full flow valve is required for single ovens. A minimum 1 inch (25.4 mm) I.D. full flow valve is required for double or triple ovens.
- Ventilation: Operable at the time of this Start-Up

NOTE: It is the recipient's responsibility to report to the freight company any concealed or non-concealed damage. Check the oven, attachments, installation kit, and oven shipping container for damage. The freight company must be notified of any claims IMMEDIATELY.

NOTE: It is the technician's responsibility to understand and have available for reference the instructions listed in the Installation Manual, attached to this form. The manual contains crucial information regarding proper set-up and operation.

Power Specifications

Electrical

	North America	EU/Asia
Phase	1 Phase	1 Phase
Voltage	208/240 VAC	220-240 VAC
Frequency	50/60 Hz	50/60 Hz
Current Draw	8 Amp	8 Amp
Supply	3 Wire (L + L + G)	3 Wire (L + L + G)
Breakers	20 amp	16 amp
Plug	NEMA L620	IEC, 309 3 PIN

Gas

-Volume: Maximum input per cavity
85k BTU (25kW [Gross])
-Min. Pressure (Nat, LP, I_{2H}, I_{2E}, I_{2E+}, I_{2L}, and I_{3P}):
6" W.C. (152.4 mm H2O / 14.94 mb)
-Max. Pressure (Nat, LP, I_{2H}, I_{2E}, I_{2E+}, I_{2L}, and I_{3P}):
14" W.C. (350.6 mm H2O / 34.87 mb)
-Burner Pressure (Nat, LP, I_{2H}, I_{2E}, I_{2E+}, and I_{3P}):
3.5" W.C. (88.9 mm H_2O / 8.71 mb)
-Burner Pressure (I_{2L}):
4.0" W.C. (101.6 mm H_2O / 9.96 mb)

Initial Start-Up Checklist Form

Circle, fill in, or mark the required information below.

Date of Installation:_____ Single Oven Start-Up? ☐ Multiple Oven Start-Up? ☐ How many? 2 3

Oven Model Number:_____ Oven Serial Number:_____

Oven Position (for locations with multiple ovens): Bottom Oven ☐ Middle Oven ☐ Upper Oven ☐

Store / Location Name:_____

Site Address:_____

City:_____ State:_____ ZIP/Postal Code:_____

Contact Name (Manager on Site):_____ Site Phone #:_____

Installer Name(s):_____

Authorized Agency:_____ Installer Phone #:_____

Assembly Checklist (page 10)

1. Attached legs? Y N
2. Removed lifting hardware and casters? Y N
3. If applicable, is the window assembly correctly installed? Y N
4. Assembled and installed conveyor belt assembly? Y N
5. Belt direction travels: L to R R to L
6. Conveyor belt configured to travel in correct direction? Y N
7. Size of gas supply line: _____
8. Size of shut-off valve used: _____
9. Size of flex hose used: _____
10. Installed strain relief cable? Y N
11. Holes in the rear of the oven plugged? Y N
12. If applicable, are the stacking brackets correctly installed? Y N
13. Is the chain set to the correct tension? Y N

Connections Checklist (page 11)

1. Soap tested all connections for gas leaks? Y N
2. Breaker size: _____
3. Individual breakers for each unit? Y N
4. Factory-supplied electrical plug used? Y N
5. Voltage readings at the terminal block:
   - L1-L2:_____
   - L1-Ground:_____
   - L2-Ground:_____
6. For which voltage is the 24 VAC transformer connected / configured? 240 VAC (red) 208 VAC (blue)

Gas Checklist (page 11)

1. Gas type supplied to oven: _____
2. Gas type listed on the oven's data plate: _____
3. OEM gas orifice used during conversion: (If a conversion was necessary) Y N N/A
4. Incoming pressure before gas valve (static): _____ (Top pressure tap on gas valve)
5. Gas pressure at 100% flame: _____ (Bottom pressure tap on gas valve)
6. Gas pressure at minimum flame: _____ (Bottom pressure tap on gas valve and disconnect the red wire off solenoid of gas valve)
7. Incoming pressure (operating): _____ (Top pressure tap on gas valve)
8. Were adjustments made? Y N
9. Check for proper flame rectification. Micro Amp reading: _____
10. Allow oven to reach set temperature. Is the gas valve modulating? Y N
11. Soap tested final gas connections? Y N

Ventilation Checklist (page 12)

1. Vent hood smoke test performed per Installation Manual? Y N
2. Percentage of smoke removed? _____%
3. Type of hood used: Power Gravity
4. Proper make-up air entering the room? Y N
5. Vent hood operates properly? Y N

Startup Checklist (page 13)

1. Conveyor belt operates properly? Y N
2. Combustion blower modulates? Y N
3. Convection blowers change speeds? (On command in the test mode) Y N
4. If provided, was a menu loaded to the oven? Y N
5. Was a satisfactory test cook performed? Y N

Customer Checklist (page 13)

1. Customer/manager has owner's manual on site? Y N
2. Customer/manager is aware of basic operation? Y N
3. Customer/manager is aware of cleaning procedures? Y N
4. Customer/manager had opportunity to ask questions? Y N

Signing below indicates the oven operates properly and the installation was performed under the guidelines of the Installation Manual supplied with this oven and available from TurboChef.

_____ _____

Technician / Installer Signature Date

_____ _____

Customer / Manager Signature Date

For service or information:

Within North America call
800.90TURBO

Outside North America call
+1 214.379.6000 or
Your Authorized Distributor

TURBOCHEF

Accelerating the World of Cooking™

Part Number: HHC-6651 / Rev. C / May 2008
Country Code: NA/EU

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